

NOAA National Weather Service

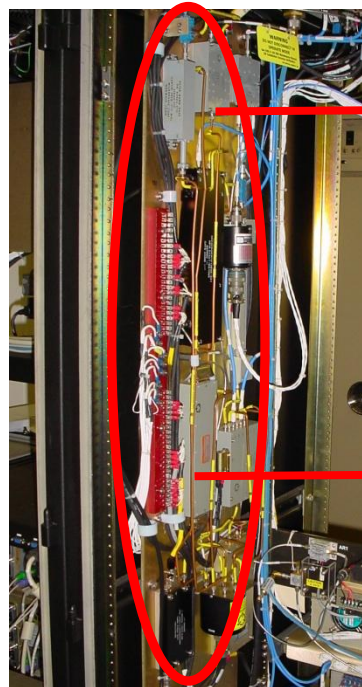
**Dual Polarization Upgrade
Equipment Improvements**

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Dual Polarization Upgrade - Better Signal Processing

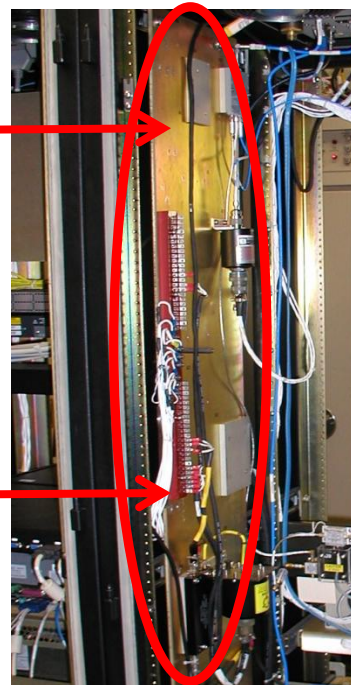


Before Upgrade



**Old Signal Processing
at Ground Level**

After Upgrade



**Old Signal Processing
No Longer at
Ground Level**

**New Signal Processing
Now Attached to the
Radar in the Dome**

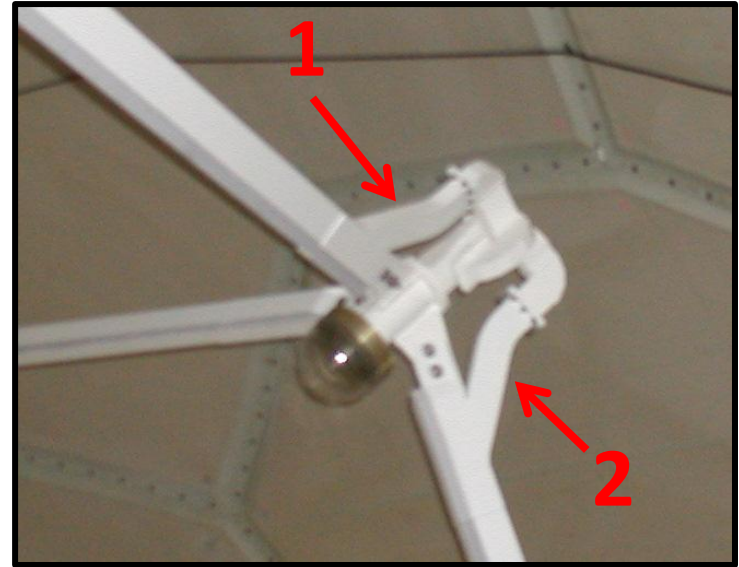


Antenna Mounted Electronics (AME) were installed in the Radar Dome with the equipment at the ground level that was developed in the late 1980s being removed. The AME is an upgrade to radar signal processing and will improve radar data quality and data reliability.

Dual Polarization Upgrade - Feed Horn Replacement



Pre – Dual Polarization
Feed Horn with 1 Wave Guide



Dual Polarization
Feed Horn with 2 Wave Guides

The Feed Horn, or the part of the radar dish that sends and receives radar pulses, was replaced during the Dual Polarization Upgrade.

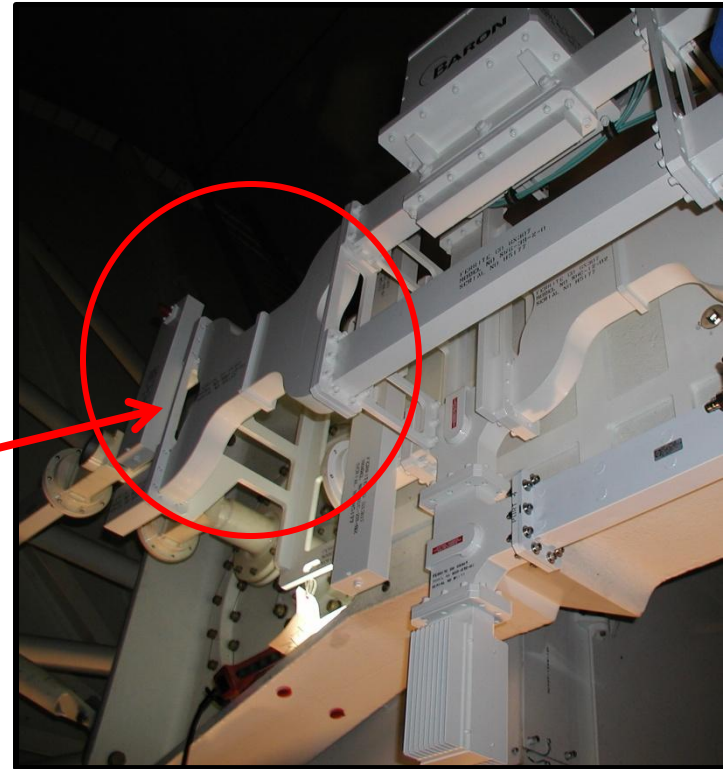
The old Feed Horn (pictured above left) consisted of only 1 wave guide that was used to guide the traditional horizontal radar pulses.

The new Feed Horn (pictured above right) consists of 2 wave guides, guiding both the traditional horizontal radar pulses and the new vertical oriented radar pulses.

Dual Polarization Upgrade – Splitting the Radar Signal



Pre – Dual Polarization
Radar Dish with no Signal Splitter



Radar Dish with new Signal Splitter

A signal splitter was installed on the radar dish. This piece of equipment splits the radar signal into the horizontal and vertical components prior to radar pulses being transmitted.